Pathogenesis of Icterus.—Abramow (*Virchow's Archiv*, 1905, Bd. clxxxi. p. 201) has made an histological study of livers in 48 cases of jaundice to determine if possible the origin of the condition. Of these, 7 cases were associated with chronic passive congestion following heart disease; 12 were cases of atrophic cirrhosis or new-growths of the liver; 19 occurred in acute infections, and 10 were instances of icterus neonatorum. From a study of this material, the author finds that there are at least three sets of conditions which must be taken into account in explaining the production of all forms of jaundice. Eppinger and others have claimed that icterus is always due to a mechanical obstruction of the flow of bile, either from occlusion of the larger bile ducts by compression, such as is seen in cirrhosis of the liver, or to the presence of bile thrombi in the bile capillaries. The author cannot agree entirely with this idea. He recognizes first an obstructive jaundice, due to compression of the bile ducts without the liver, as in catarrh of the duodenum, gallstones or tumors of the papilla of Vater and pancreas; obstruction of the interacinar branches within the liver, as is seen in atrophic cirrhosis of the liver, and occlusion of the capillaries by bile thrombi. This latter form of obstruction affects only portions of the liver and may occur in many diseases of this organ. The author considers that only in the cases associated with circulatory disturbances is this thrombosis of the bile capillaries of etiological significance in the production of jaundice. Secondly, he considers the importance of destructive processes in the liver parenchyma. Destruction of the liver cells may occur with new-growths or with circulatory disturbances. With the destruction of liver cells surrounding bile capillaries, the capillaries, which have no independent existence, are likewise destroyed, and since in the liver the bile capillaries form an extensive network, the capillaries of one acinus anastomosing with the capillaries of another, it is readily conceivable that bile might escape under the above conditions into the perivascular spaces and be absorbed by the lymphatics. The third method for the production of jaundice is through functional disturbances of the liver cells. This form of icterus occurs in the infectious diseases and in icterus neonatorum. It is dependent upon an increase in the quantity and decrease in the energy of the secretion of bile, and is termed by the author "asthenische hypercholie."

The Formation of Fibrin in Congestion of the Liver.—Quite recently Hart (*Ziegler's Beiträge*, 1904, Bd. xxxv.) has described certain changes in the liver which he thought were associated with the atrophy of the liver cells at the centres of the lobules in chronic passive congestion of the liver. His conclusions were that in the region of the capillaries of the liver in chronic passive congestion one constantly finds thrombi as soon as the liver cells have undergone degeneration. These thrombi lie in the region of the destroyed liver cells, and their size is proportional to the number of liver cells destroyed. The appearance of the thrombi forms a new argument for the theory of Alexander Schmidt concerning the relationship between fibrin coagulation and cell destruction. To control this work, L'Engle (*Ziegler's Beiträge*, 1905, Bd. xxxviii. p. 354) has studied the livers from 5 cases of heart disease, 9 conditions in which there was no congestion of the liver, and 1 case of brain tumor dying of suffocation (acute congestion). He can find no evidence to establish the fact that in congestion of the liver the cell atrophy is a cause of the fibrin formation. The atrophy of the liver cells is a consequence of the blood pressure in the capillaries. In the case of acute congestion the fibrin formation in the capillaries took place after death, and the same explanation may be offered to account for the formation of the fibrin in cases of chronic congestion.

HAYAMI (*Ziegler's Beiträge*, 1905, Bd. xxxviii. p. 361), from a study of 19 cases of chronic passive congestion of the liver, comes to nearly the same conclusions as L'Engle. He finds that besides the well-known atrophy and regressive changes of the liver cells at the centre of the lobules, with occasionally slight increase in the intra-acinar connective tissue, no other constant alterations occur. Fibrin formation in the capillaries is not of constant occurrence, and, if not in all cases, at least in most, forms "subfinem" or postmortem. No connection could be made out between the production of fibrin and death of the liver cells.

Cytotoxic Serum Produced by the Injection of Nucleoproteids.—BEEBE (*Jour. Exp. Med.*, 1905, vol. vii. p. 733) presents an interesting report of his experiments in which he attempted to produce in rabbits specific cytotoxic sera for various organs by the injection of nucleoproteids derived from those organs. The practical importance of the production of specific cytotoxins is great, and any work which tends toward solving the problem of producing cytotoxins for morbid growths, especially malignant tumors, is of unusual interest. Beebe has endeavored, by a process which he described, to obtain an extract from cells which is largely composed of nuclear substance, and thus do away with the use of such a complex chemical substance as the entire cell. He believes that his extracts, which he obtained from the organs of calves, are largely composed of nucleic acid with a small amount of proteid substance combined. He injected nucleoproteids obtained from the liver, kidney, and pancreas into the peritoneal cavities of rabbits. Sera obtained from these animals were given intravenously to dogs. The results obtained are very suggestive that cytotoxins with high specific properties were present in all of the sera obtained.

Those sera containing a nephrotoxin caused in five dogs marked lesions of acute nephritis, and symptoms indicating that the dogs were nearly dead when they were chloroformed. The work of Pearce and others was confirmed in this respect. In three dogs to which a hepatoxic serum was administered, serious lesions of the liver, principally characterized by focal necroses, were found with only slight changes in the other organs.

By the use of a pancreas antiserum one dog showed acute symptoms of marked indigestion and diarrhœa nine days after injection of the serum, and the urine gave a partial reduction of Fehling's solution. Nothing abnormal was found in any of the organs except in the pancreas, which was softer and redder than usual. An histological study of the pancreas could not be made on account of imperfect fixation. A second dog showed a similar course and condition. After the injection of all antisera a latent period of from four to ten days existed before manifestation of symptoms occurred.

The author hopes by the pursuance of this subject to bring into it more simple chemical terms, but he does not believe that a serum absolutely specific for a single organ can be produced.